CLAIMS

1. A method of designing a knitted fabric by dividing a design of the knitted fabric into a plurality of parts, the method comprising the steps of:

designing a pattern spread over a plurality of parts on a composite image of the plurality of parts such that the pattern is spread above and below a narrowing course or a widening course;

then, determining the number of non-uniform narrowing stitches or widening stitches above and below the narrowing course or the widening course;

shifting a portion of the pattern on the upper side the narrowing course toward the center in the left-right direction of the knitted fabric relative to a portion on the lower side of the narrowing course by the amount corresponding to the stitch number of the narrowing stitches, or shifting a portion of the pattern on the upper side of the widening course toward the outer side in the left-right direction of the knitted fabric relative to the portion on the lower side of the widening course by the amount corresponding to the stitch number of the widening stitches, thereby assigning the pattern to the plurality of parts.

2. The knit design method of claim 1, wherein the plurality of parts comprise a plurality of gores, or a body and a sleeve.

3. The knit design method of claim 1, wherein the non-uniform stitch number of the narrowing stitches or the widening stitches is determined for each of left and right borders of the pattern, and respective left and right borders of the pattern on the upper side of the narrowing course or the widening course are shifted relative to borders on the lower side by the amount corresponding to the determined non-uniform stitch number.

4. The knit design method of claim 3, wherein after the left and right borders of the pattern on the upper side is shifted relative to the borders on the lower side by the amount corresponding to the determined non-uniform stitch number, the pattern is assigned to the plurality of parts.

5. The knit design method of claim 1, wherein after the pattern is assigned to the plurality of parts imaginarily, portions of the respective parts of the pattern are shifted in the left-right direction by the amount corresponding to non-uniform narrowing stitches or widening stitches, and by the shift, data of the pattern assigned to imaginary wale without knitting stitches is deleted, or by the shift, if any wale which does not have assigned data of the pattern is generated, data of the pattern of the surrounding data is assigned.

6. The knit design method of claim 1, wherein an area which has already lost knitting stitches by the narrowing stitches at the height position of the lower end of the pattern is registered as a count prohibition area, an area which is going to lose knitting stitches by the narrowing stitches at the position higher than the lower end of the pattern is registered as a narrowing area, data of the pattern is assigned to the parts and the narrowing area such that the count prohibition area is skipped, and the data of the pattern assigned to the narrowing area is deleted.

7. The knit design method of claim 1, wherein the pattern of the entire knitted fabric is divided into a plurality layers, the layers are processed one by one, and relative movement between the layers is made possible.

8. The knit design method of claim 1, wherein data of the pattern between a line extending from the height position of the lower end of the of the pattern and the end of the knitted fabric on a composite image of the plurality of parts is shifted into the knitting

width as supplemental data, and by the shift, an area without any pattern near the end of the knitted fabric is supplemented.

9. The knit design method of claim 8, wherein data outside the supplement area is warped around to the knitted fabric on the opposite side on the composite image of the plurality of images.

10. The knit design method of claim 1, wherein the knitted fabric is a cylindrical knitted fabric, and based on a base position of the basic pattern as a unit of a round pattern, the stitch number for one round of the cylindrical knitted fabric near the base point, and the stitch number of the basic pattern, the layout of the basic pattern is determined.

11. A knit design apparatus comprising image input means, means for dividing a design image of a knitted fabric inputted by the image input means into a plurality of parts, means for converting the design image between a composite image formed by combining a plurality of parts and an image including a plurality of divided parts, and means for converting the obtained image data into knitting data used in a knitting machine, the knit design apparatus further comprising:

means for detecting that a pattern of the kitted fabric inputted on the composite image is spread over the plurality of parts, and spread above and below a narrowing course or a widening course;

means for determining the number of non-uniform narrowing stitches or widening stitches above and below the narrowing course or the widening course; and

means for shifting a portion of the pattern on the upper side of the narrowing course toward the center in the left-right direction of the knitted fabric relative to a portion on the lower side of the narrowing course by the amount corresponding to the

stitch number of the narrowing stitches, or shifting a portion of the pattern on the upper side of the widening course toward the outer side in the left-right direction of the knitted fabric relative to the portion on the lower side of the widening course by the amount corresponding to the stitch number of the widening stitches, thereby assigning the pattern to the plurality of parts.

12. The knit design apparatus of claim 11, wherein the plurality of parts comprise a plurality of gores, or a body and a sleeve.

13. The knit design apparatus of claim 11, further comprising:

means for assigning the pattern to the plurality of parts imaginarily; and

means for shifting the portion of the respective parts of the pattern in the left-right direction by the amount corresponding to non-uniform narrowing stitches or widening stitches, and by the shift, deleting data of the pattern assigned to imaginary wale without knitting stitches, or by the shift, if any wale which does not have assigned data of the pattern is generated, assigning data of the pattern of the surrounding data.

14. A knit design program comprising a command for dividing a design image of a knitted fabric into a plurality of parts, a command for converting the design image between a composite image formed by combining a plurality of parts and an image including a plurality of divided parts, and a command for converting the obtained image data into knitting data, the knit design program further comprising:

a command for detecting that a pattern of the kitted fabric inputted on the composite image is spread over the plurality of parts, and spread above and below a narrowing course or a widening course;

a command for determining the number of non-uniform narrowing stitches or widening stitches above and below the narrowing course or the widening course; and

a command for shifting a portion of the pattern on the upper side of the narrowing course toward the center in the left-right direction of the knitted fabric relative to a portion on the lower side of the narrowing course by the amount corresponding to the stitch number of the narrowing stitches, or shifting a portion of the pattern on the upper side of the widening course toward the outer side in the left-right direction of the knitted fabric relative to the portion on the lower side of the widening course by the amount corresponding to the stitch number of the widening stitches, thereby assigning the pattern to the plurality of parts.